AMENDMENTS TO THE CLAIMS

1. (Original) A communication system comprising plural communication terminals each having a relay function, and a host having a relay function and a route control function, wherein

during route search, said communication terminal adds an ID of the self-terminal to a route search packet and broadcasts the route search packet over an area where communication is possible;

on receipt of a route search packet, said communication terminal adds the ID of the self-terminal to the received route search packet if the ID of the self-terminal is not added to the route search packet, and broadcasts the route search packet over the area where communication is possible; and

said host obtains information of route up to the communication terminal on the basis of the received route search packet, and notifies the communication terminal of the obtained route information.

2. (Original) A communication system as defined in Claim 1, wherein said host obtains information of routes up to all of the communication terminals on the basis of the received route search packet.

3. (Original) A communication system as defined in Claim 1, wherein

during data communication, said communication terminal creates route information data on the basis of an ID of a destination terminal and IDs of relay terminals between the self-terminal and the host, and adds the route information data to a data packet to transmit the data packet to the host;

on receipt of a data packet, said communication terminal transfers the received data packet on the basis of route information data of the received data packet when a destination terminal of the received data packet is not the self terminal; and

said host creates route information data between itself and the destination terminal on the basis of the route information data of the received data packet when the destination terminal of the

received data packet is not the self-terminal, adds the destination terminal ID and the created route information data to the data packet, and transfer the data packet to the destination terminal.

4. (Original) A communication system as defined in Claim 1, wherein said IDs are IP addresses.

5. (Original) A communication system as defined in Claim 1, wherein said IDs are MAC addresses.

6. (Original) A communication system as defined in Claim 1, wherein said IDs are specific codes.

7. (Original) A communication system as defined in Claim 1, wherein

said host and said communication terminal obtain data indicating the communication state between the self-terminal and a packet transmission source terminal, and adds the data indicating the communication state to the route search packet; and

said host selects an optimum route on the basis of the data indicating the communication state.

8. (Original) A communication system as defined in Claim 7, wherein said data indicating the communication state is the type of media.

9. (Original) A communication system as defined in Claim 7, wherein said data indicating the communication state is the error rate.

10. (Original) A communication system as defined in Claim 7, wherein said data indicating the communication state is the reception sensitivity.

11. (Original) A communication system as defined in Claim 1, wherein

said host creates pattern information of route having a specific communication terminal as a relay terminal on the basis of the route information obtained during route search, and notifies each communication terminal of the created pattern information at arbitrary timing or periodically;

on receipt of a data packet, said host transfers the received data packet on the basis of pattern information of the data packet when the destination terminal of the data packet is not the self-terminal;

said communication terminal adds, to a data packet, pattern information of route up to an arbitrary communication terminal, and transmits the data packet; and

on receipt of a data packet, said communication terminal transfers the received data packet on the basis of the pattern information of the data packet when the destination terminal of the data packet is not the self-terminal.

12. (Original) A communication system as defined in Claim 1, wherein

when there are plural routes to one communication terminal, said host assigns priorities to the respective routes, and stores a database in which the priorities of the respective routes are entered;

during data communication, said communication terminal and said host try to communicate with each other through a route of the highest priority among the routes entered in the database of the host; and

when the communication fails, said communication terminal and said host try to communicate again through a route of the second highest priority.

13. (Original) A communication system as defined in Claim 12, wherein

when data communication is not carried out, said host investigates the routes entered in the database, and updates the route information entered in the database on the basis of the results of the route investigation and data communication.

14. (Original) A communication system as defined in Claim 12, wherein said host assigns priorities on the basis of the time taken until the packet arrives.

15. (Original) A communication system as defined in Claim 12, wherein said host assigns priorities on the basis of the number of relay terminals.

16. (Original) A communication system as defined in claim 12, wherein said host assigns priorities on the basis of the error rate.

17. (Original) A communication system as defined in Claim 12, wherein said host assigns priorities on the basis of the type of media.

18. (Original) A communication system comprising plural communication terminals each having a relay function, and a host having a relay function and a route control function, wherein

during route search, said communication terminal adds an ID of the self-terminal to a route search packet, and broadcasts the packet over an area where communication is possible; and

on receipt of a route search packet, said communication terminal adds the ID of the self-terminal if it is not added to the received route search packet, and broadcasts the packet over the area where communication is possible; and

said host obtains information of route up to the communication terminal and information of routes between the respective terminals, and notifies the communication terminal of the obtained route information.

19. (Original) A communication system comprising plural communication terminals each having a relay function, and a host having a relay function and a route control function, wherein

during route search, said communication terminal adds an ID of the self-terminal to a route search packet and broadcasts the packet;

on receipt of a route search packet, said communication terminal obtains information of route up to the host and information of route between the self-terminal and another communication terminal, and notifies the host of the obtained route information; and

said host stores the route information notified from the communication terminal into the database.

20. (Currently Amended) A communication system as defined in Claim 18 ~~or 19~~, wherein

during data communication, said communication terminal obtains, from the host, route information including information of communication terminals that serve as relay terminals in data transmission to a destination terminal, and adds an ID of the destination terminal and IDs of the relay terminals between the self-terminal and the destination terminal to the data packet, and transmits the data packet; and

on receipt of a data packet, said communication terminal transfers the received data packet to a next destination terminal on the basis of the route information obtained from the host when the destination terminal of the received data packet is not the self-terminal.

21. (New) A communication system as defined in Claim 19, wherein

during data communication, said communication terminal obtains, from the host, route information including information of communication terminals that serve as relay terminals in data transmission to a destination terminal, and adds an ID of the destination terminal and IDs of the relay terminals between the self-terminal and the destination terminal to the data packet, and transmits the data packet; and

on receipt of a data packet, said communication terminal transfers the received data packet to a next destination terminal on the basis of the route information obtained from the host when the destination terminal of the received data packet is not the self-terminal.